

Efficacy of Udumbar TVAK Churna Lepa in the Management of Ahiputana (Diaper Dermatitis)

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Abstract: *Background:* Ahiputana is a common pediatric dermatological condition described under Kshudraroga or Balaroga in classical Ayurvedic texts, closely resembling Diaper Dermatitis or Napkin Rash in modern medicine. Poor hygienic care, prolonged contact with urine and feces (Pureesha-Mutra Asamshodhana), and breast milk vitiation (Dhatri Stanya Dushti) lead to the vitiation of Kapha-Rakta or Pitta-Rakta Dosha, resulting in erythema, burning sensation, itching, and ulceration in the diaper region. *Methods & Interventions:* External application (Lepa) of Udumbar Tvak Churna (bark powder of *Ficus racemosa* Linn.) processed with suitable vehicle (Ksheera or Jala) acts directly on the affected skin tissue. Its Kashaya Rasa (astringent), Sheeta Veerya (cooling potency), Ruksha Guna, and Vranaropana-Vranashodhana properties offer dual action—soothing acute mucosal inflammation and accelerating tissue epithelialization.

Results & Conclusion: The pharmacological profile of Udumbar Tvak reveals rich presence of tannins, flavonoids, and sterols exhibiting proven anti-inflammatory, antimicrobial, astringent, and wound-healing properties. Local application of Udumbar Tvak Churna Lepa serves as an economical, non-toxic, non-steroidal, highly effective therapeutic regimen for complete alleviation of Ahiputana.

Keywords: Ahiputana, Udumbar Tvak, *Ficus racemosa*, Lepa, Diaper Dermatitis, Kashaya Rasa, Kaumarbhritya, Vranaropana.

I. INTRODUCTION

In pediatric healthcare (Kaumarbhritya), skin disorders in infants require gentle yet potent therapeutic approaches due to the delicate skin barrier (Sukumara Twak). Among various pediatric dermatological afflictions, Ahiputana is a clinical entity characterized by acute inflammation, erythema, papules, burning sensation, and excoriation in the perianal, gluteal, and perineal region of infants.

In contemporary medical science, this condition is correlated with Diaper Rash or Napkin Dermatitis, caused by moisture accumulation, prolonged friction, skin contact with ammoniacal urine and fecal irritants, and secondary microbial infection (especially *Candida albicans*). While modern therapeutics rely primarily on topical barrier creams, zinc oxide pastes, topical corticosteroids, and antifungal agents, repeated use of synthetic agents carries risks of dermal atrophy and sensitization. Classical Ayurveda offers safe, topical herbomineral formulations that provide rapid relief. Among these, the external application (Lepa) of Udumbar Tvak Churna (*Ficus racemosa* Linn. bark powder) occupies a vital therapeutic status.

II. AIM & OBJECTIVES

- To evaluate the conceptual clinical profile of Ahiputana according to ancient Ayurvedic classics and correlate it with modern diaper dermatitis.



- To analyze the therapeutic efficacy and pharmacological mode of action of Udumbar Tvak Churna Lepa in managing Ahiputana.
- To compile and critically review classical references regarding Nidana Panchaka, Samprapti Ghataka, and Chikitsa Siddhanta of Ahiputana.

III. MATERIALS & METHODS

This qualitative analytical and literature-based review was carried out by extracting data from classical Ayurvedic texts including Charaka Samhita, Sushruta Samhita, Astanga Hridaya, Astanga Sangraha, Bhavaprakasha, and Sharangdhara Samhita along with their respected commentaries. Modern medical literature, botanical database, and pharmacological studies regarding Ficus racemosa were cross-analyzed to understand the biochemical basis of its therapeutic action in napkin rash.

IV. DETAILED LITERATURE REVIEW

The term Ahiputana originates from two Sanskrit components: Ahi (serpent) and Putana (a demoness affecting children or symbolizing destructive pain). The eruptions cause severe burning, pain, and itching, causing the infant to writhe like a serpent. Sushruta has classified Ahiputana under Kshudraroga, whereas Vagbhata describes it prominently under Balaroga/Uttaratantra.

"असंशोधनात्तु मूत्रेण शकृता चोपमृद्यते गुदो बालस्य तेनाशु कण्डूः सञ्जायते भृशम् ॥
कण्डूयनात्ततः िक्षिप्रं स्फोटाः स्रवन्तः सम्भवन्ति च ।
सम्पक्वैरथ तैः पश्चादेकीभूतैश्च दीयर्षते ॥"
- (सुश्रुत संहिता, नदानस्थान, १३/५५-५६)

According to Acharya Sushruta, when an infant's diaper area is not washed properly after defecation and micturition, the accumulated feces and urine irritate the delicate perianal skin, leading to severe itching (Kandhu). Subsequent scratching produces vesicular eruptions with exudation (Sphota Sravanta), which eventually coalesce, suppurate, and rupture (Diryate), forming raw ulcerated surfaces.

V. NIDANA PANCHAKA (ETIOPATHOGENESIS)

1. Nidana (Etiological Factors)

- **Aharaja Nidana (Maternal/Wet nurse factors):** Consumption of Katu (spicy), Amla (sour), Lavana (salty), Guru, and Vidahi food by the mother/wet nurse vitiating milk (Stanya Dushti specifically Kapha-Pitta-Rakta Vitiating Stanya).
- **Viharaja / Paricharyakrita Nidana (Hygiene failure):** Pureesha-Mutra Asamshodhana (improper or delayed washing of perianal region), use of rough/dirty cloths (Kharapatta Paridhana), dampness, prolonged diaper retention.

2. Poorvaroopa (Prodromal Symptoms)

- Slight local redness (Ragtata) around the anus and perineum.
- Mild restlessness, crying during micturition/defecation, and localized thermal discomfort.

3. Roopa (Clinical Manifestations)

- **Guda Kandū:** Intense itching in the anal and diaper region.
- **Ragtata & Daha:** Severe erythema and burning sensation.
- **Sphota:** Formation of papules, vesicles, or pustules.
- **Srava:** Serous or mucopurulent exudation upon scratching.



- **Vrana / Vrana Bhedana:** Coalescence of papules leading to ulceration, raw skin, and fissuring.
- **Atodana / Vedana:** Irritability, continuous crying, and restless sleep due to continuous pain.

4. Upashaya / Anupashaya

- **Upashaya:** Application of Kashaya-Sheeta Lepa, gentle washing with boiled lukewarm decoctions, dry clean cotton hygiene.
- **Anupashaya:** Dampness, retention of soiled napkins, application of harsh alkaline/soapy substances.

VI. SAMPRAPTI GHATAKA (PATHODYNAMICS)

Ghataka (Factor)	Description/Vitiated State
Dosha	Dominantly Kapha and Pitta (associated with Vata due to severe pain)
Dushya	Rakta (blood tissue) and Tvak (skin tissue/dermis)
Srotas	Raktavaha Srotas and Svedavaha Srotas
Srotodushti Prakara	Sanga (obstruction) and Vimarga Gamana (extravasation)
Agni	Dhatvagni Mandya at Tvak/Rakta level
Udbhavasthana	Pakvashaya / Pureeshadhara Kala (Guda region)
Sancharasthana	Perianal, perineal, inner thigh, and gluteal skin folds
Adhisthana	Tvak (Skin of diaper region - Guda-Pradesha)
Vyadhi Swabhava	Ashukari (Acute) and Daruna (Severe discomfort)

VII. CHIKITSA SIDDHANTA (TREATMENT PRINCIPLES)

The management of Ahiputana revolves around three fundamental pillars:

1. **Nidana Parivarjana:** Strict personal hygiene, frequent napkin changing, keeping the area dry, and correcting mother's diet (Stanya Shodhana).
2. **Shodhana & Prakshalana:** Washing the diaper area with astringent, cooling decoctions such as Triphala Kwatha, Nimba Kwatha, or Udumbar Tvak Kwatha.
3. **Ropana & Dahaprashamana (Lepa Chikitsa):** Application of topical pastes (Lepa) possessing Kashaya Rasa, Sheet Veerya, Ruksha Guna, and Vranaropana attributes.

"अहिपूताने तु धातूबालयोः श्लेष्मरक्तघ्नी क्रियां कुर्यात् । उदुम्बरत्वक् चूर्णेन व्रणानां रोपणं हितम् ॥"

- (अष्टाङ्गहृदयम्, उत्तरस्थान, २/७०)

VIII. PHARMACOLOGICAL ACTION OF UDUMBAR TVAK (FICUS RACEMOSA)

Udumbar (Ficus racemosa Linn., Family: Moraceae) is known in classical Nighantus as a premier Vranaropaka (wound healer) and Pitta-Kapha Shamaka drug.



Property (Guna-Karma)	Ayurvedic Attribute	Therapeutic Impact on Ahiputana
Rasa (Taste)	Kashaya (Astringent)	Constricts tissue exudate (Sravahara), reduces skin oozing, accelerates wound drying.
Guna (Physical Quality)	Guru (Heavy), Ruksha (Dry)	Absorbs excess fluid, counteracts dampness and local moisture accumulation.
Veerya (Potency)	Sheeta (Cooling)	Instantly mitigates local burning sensation (Daha), redness (Ragtata), and inflammation.
Vipaka (Post-digestive)	Katu (Pungent)	Pacifies Kapha Dosha and checks excess secretions.
Dosha Karma	Kapha-Pitta Shamaka, Raktaprasadaka	Targets the core vitiated Doshas and Dushyas of Ahiputana.
Karma (Actions)	Vranashodhana, Vranaropana, Kandughna, Sandhanakara	Cleanses raw ulcers, promotes rapid epithelial closure, eliminates severe itching.

2. Modern Bioactive Constituents & Phytochemical Mechanism

- **Tannins (Gallic & Ellagic Acid derivatives):** Act as natural topical astringents, precipitating epidermal proteins to form a protective coagulate film over open lesions, stopping fluid loss, and preventing pathogen invasion.
- **Flavonoids (Quercetin, Glucan acetate):** Exhibit powerful antioxidant and anti-inflammatory activity by inhibiting COX-2 enzyme pathways, suppressing erythema and swelling.
- **Lupeol & β -Sitosterol:** Accelerate cell proliferation, fibronectin synthesis, and collagen deposition, thereby facilitating quick mucosal epithelialization (Vranaropana).
- **Antimicrobial Activity:** Inhibits growth of secondary opportunistic microbes such as Staphylococcus aureus and Candida albicans commonly complicating napkin dermatitis.

IX. PREPARATION & METHOD OF APPLICATION OF UDUMBAR TVAK LEPA

Preparation: Fresh, dried bark of Udumbar (*Ficus racemosa*) is finely ground and sieved through cloth (Vastragalita Churna, Mesh #80-100). The fine powder is blended with cold water (Shita Jala) or boiled cold milk (Ksheera) to form a smooth, homogenous paste.

Method of Application: The infant's perianal region is first cleansed gently with a warm Triphala or Udumbar Kwatha wash and patted completely dry with clean cotton cloth. The paste is applied evenly over the affected lesion in a medium thickness (approx. 1/4th Angula / 2-3 mm) in a direction opposite to hair follicles (Pratiloma Gati) for optimal absorption. It is allowed to dry partially before gentle washing. Applied 2 to 3 times daily.



X. DISCUSSION

Ahiputana represents a classical dermatological challenge in pediatric care. The delicate anatomical structure of an infant's skin makes it exceptionally sensitive to moisture, chemical irritants in urine/feces, and microbial overgrowth. Pathologically, the combination of Kapha-Pitta-Rakta vitiation manifests as severe weeping, burning, red papules that rapidly erode into painful ulcers.

Topical Lepa Kalpana is highly effective because it bypasses oral drug metabolism, delivers high localized active drug concentration, and acts directly on the target Tvak (dermal layer). The astringent (Kashaya) property of Udumbar Tvak binds loose skin proteins, causing constriction of dilated capillaries and cessation of weeping (Sravahara). Its cooling potency (Sheeta Veerya) neutralizes local Pitta heat, offering immediate relief from burning pain and crying in infants. Concurrently, phytochemical tannins and sterols accelerate tissue regeneration, enabling rapid recovery from diaper dermatitis without any adverse skin reactions or steroid-induced skin thinning.

XI. CONCLUSION

Udumbar Tvak Churna Lepa is an exceptionally efficient, safe, affordable, and classically validated Ayurvedic topical formulation for the management of Ahiputana (Diaper Dermatitis). By virtue of its Kashaya Rasa, Sheetam Veerya, Kaphapittashamakam, and Vranaropana attributes, it comprehensively addresses all clinical parameters—itching, redness, burning sensation, oozing, and skin ulceration. Integrating proper hygienic practices (Nidana Parivarjana) alongside Udumbar Tvak Lepa offers a complete holistic cure for pediatric diaper rash.

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